

LAND APPLICATION SITE

DOROTHY A. ROWE

DWDAR 1-3

DINWIDDIE COUNTY

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 10/17/15 between Dorothy Rowe referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Dinwiddie, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>TM 51 P 21</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Dorothy A. Rowe</u>	<u>Dorothy Rowe</u>	<u>15609 Gills Bridge Rd</u>
Landowner - Printed Name, Title	Signature	Mailing Address & Phone Number
		<u>McKenney, Va. 23872</u>
		<u>434-294-7880</u>

Permittee:

Recyc Systems, Inc., the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

<u>Strumbo</u>	<u>Strumbo</u>	<u>PO Box 562 Remington, Virginia 22734</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc

County or City: Dinwiddie

Landowner: Dorothy A. Rowe

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Dorothy Rowe
Landowner's Signature

10/17/15
Date

Hugh T. Pige
Farm Operator Signature

5112 Lenn RD
Mailing Address & Phone Number
McKenney, VA 23872
434-955-7814

[illegible]

FARM DATA SHEET

SITE NAME:	Harvey L Rowe	COUNTY:	Dinwiddie
OWNER:	Dorothy A. Rowe	OPERATOR:	Hugh Rogers
OWNER'S ADDRESS:	15609 Gills Bridge Road McKenney, VA 23872	OPERATOR'S ADDRESS:	5112 Lennie Road McKenney, VA 23872
OWNER'S TELEPHONE:	434-294-7880	OPERATOR'S TELEPHONE:	804-478-4631
GENERAL FARM TYPE:	Pasture	CELL PHONE:	434-955-7814
# CATTLE:	10	EMAIL:	-
LAGOON or SLURRY:	None	LATITUDE:	37.055
TOPO QUAD:	Darvills	LONGITUDE:	-77.836
COMMENTS:	METHOD OF DETERMINATION: Online Maps		
The new Dorothy A. Rowe book is the old Harvey L. Rowe book.			

BB/AB
7-27-20

RECYC SYSTEMS, INC

FIELD DATA SHEET

Field Identification	Gross Acres	Environmentally Sensitive Soils				Hydro Map	Tax Map #	FSA Tract #
		Water Table	Bed Rock/ Shallow	Surf/ Leach	Freq Flood			
DWDAR 1	9.7	-	-	-	-	CU 11	51-21	T 529 F 4, 5
DWDAR 2	11.2	-	-	-	-	CU 11	51-21	T 529 F 1
DWDAR 3	9.3	-	-	-	-	CU 11	51-21	T 529 F 3, 7
TOTAL ACRES IN SITE	30.2							

7-27-20

Report Number: 19-130-0501

Account Number: 70594

*"Every acre...Every year."™*

7621 Whitepine Road, Richmond, VA 23237

Main 804-743-9401 ° Fax 804-271-6446

www.waypointanalytical.com

Send To: Recyc Systems Inc
Susan Trumbo
8455 Whiteshop Road
Culpepper VA 22701

Grower: Harvey Rowe
Dinwiddie

SOIL ANALYSIS REPORT

Analytical Method(s): SMP Buffer pH Mehlich 3 Loss On Ignition Water pH

Date Received: 05/10/2019

Date Of Analysis: 05/13/2019

Date Of Report: 05/13/2019

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
DWHLR-1	11041	1.9 L		81	132 VH			28 VL	30 VL	814 H		6.3	6.88	0.5	4.9
DWHLR-2	11042	2.3 L		88	69 H			30 VL	44 L	751 H		5.7	6.82	1.1	5.3

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
DWHLR-1	1.5	5.1	83.1		10.2			5.3 H	12 M						
DWHLR-2	1.5	6.9	70.8		20.8			4.3 H	9 L						

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Pauric McGroary*

Pauric McGroary

Report Number: 19-130-0501

Account Number: 70594

*"Every acre...Every year."™*

7621 Whitepine Road, Richmond, VA 23237

Main 804-743-9401 ° Fax 804-271-6446

www.waypointanalytical.com

Send To: Recyc Systems Inc
Susan Trumbo
8455 Whiteshop Road
Culpepper VA 22701

Grower: Harvey Rowe
Dinwiddie

Date Received: 05/10/2019

Date Of Report: 05/13/2019

SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P ₂ O ₅ lb/A	Potash K ₂ O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
DWHLR-1	Adjust pH to 6.8	0	1.0				20			2			
DWHLR-2	Adjust pH to 6.8	0	1.5				18			3			

Comments:**Sample(s) : DWHLR-2 Crop: Adjust pH to 6.8**

Apply dolomitic lime to raise pH and improve the magnesium level.

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

Our reports and letters are for the exclusive and confidential use of our clients,, and may not be reproduced in whole or part, nor may any reference be made to the work,the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization. Copy right 1977.

Pauric McGroary

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Fall, 2020-Winter, 2022)
Dorothy A. Rowe
Planner: John Doe

Tract: 529 Location: Dinwiddie
(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
4, 5/DWDAR 1(N)	10/10	2020	Grass Pasture	50-30-40	0/0				50-30-40	N/A			
1/DWDAR 2(N)	11/11	2020	Grass Pasture	50-30-40	0/0				50-30-40	N/A			
3, 7/DWDAR 3(N)	9/9	2020	Grass Pasture	50-30-40	0/0				50-30-40	N/A			

Commercial Application Methods:
br - Broadcast ba - Banded sd - Sidedress

Notes:

Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
529	DWDAR 1	10	[No Test]						
529	DWDAR 2	11	[No Test]						
529	DWDAR 3	9	[No Test]						

Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
529	529/4, 5	DWDAR 1	10	Appling	IVa	II	III	III	
	529/1	DWDAR 2	11	Appling	IVa	II	III	III	
	529/3, 7	DWDAR 3	9	Appling	IVa	II	III	III	

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

Farm Summary Report

Plan: **New Plan** **Fall, 2020 - Winter, 2022**

Farm Name: **Dorothy A. Rowe**

Location: Dinwiddie

Specialist: John Doe

N-based Acres: 30.2

P-based Acres: 0.0

Tract Name: **529**

FSA Number: 529

Location: Dinwiddie

Field Name: **DWDAR 1**

Total Acres: 9.70 Usable Acres: 9.70

FSA Number: 4, 5

Tract: 529

Location: Dinwiddie

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Soils:

PERCENT	SYMBOL	SOIL SERIES
---------	--------	-------------

100 2B Appling

Field Warnings:

Field Name: **DWDAR 2**
Total Acres: 11.20 Usable Acres: 11.20
FSA Number: 1
Tract: 529
Location: Dinwiddie
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
57	2B	Appling
43	2C	Appling

Field Warnings:

Field Name: **DWDAR 3**
Total Acres: 9.30 Usable Acres: 9.30
FSA Number: 3, 7
Tract: 529
Location: Dinwiddie
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

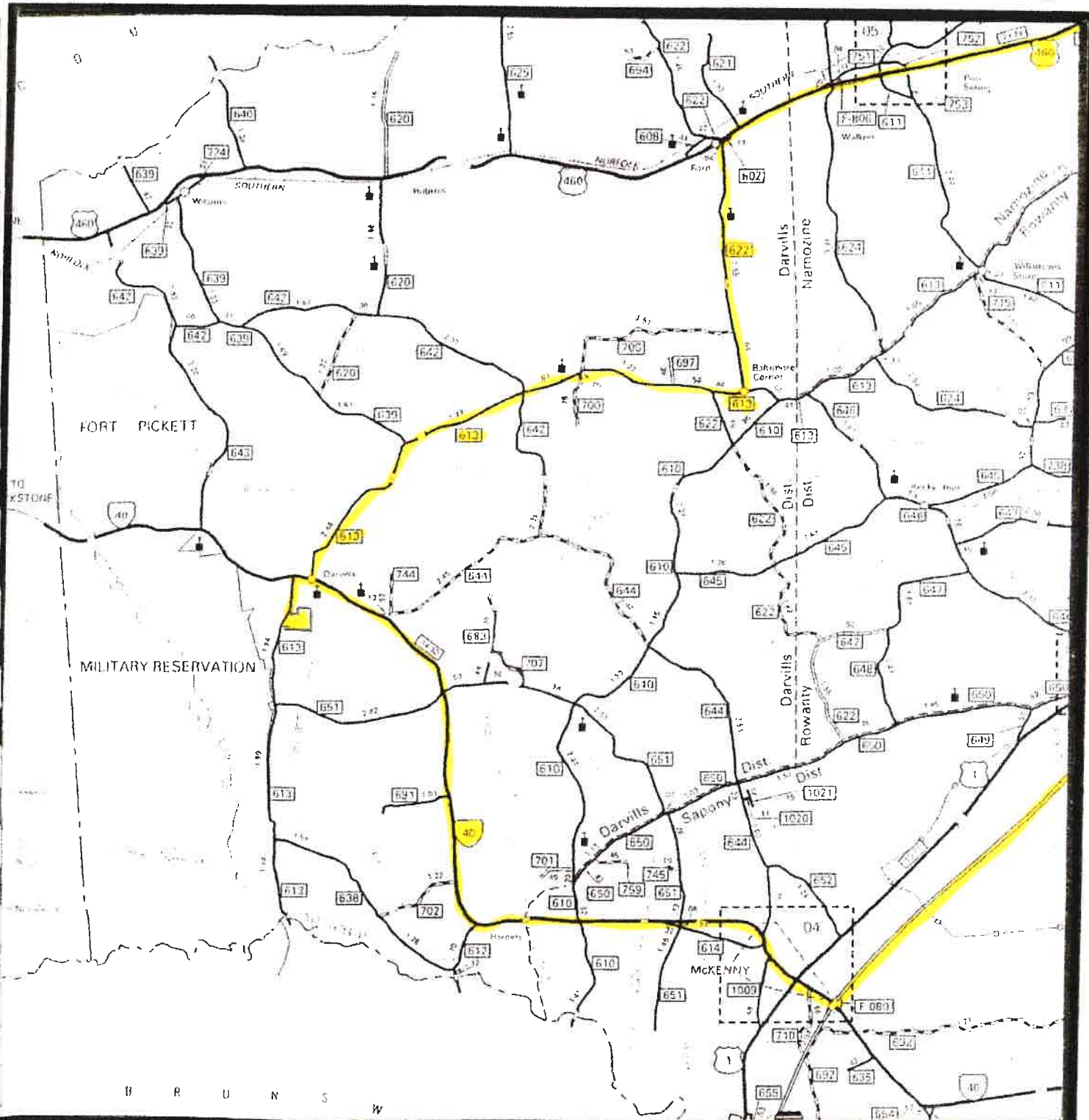
PERCENT	SYMBOL	SOIL SERIES
14	2C	Appling
86	2B	Appling

Field Warnings:

MAPS

Inc.

(Biosolids Land Application)



Scale:

1 inch = 2 miles

DWHLR 1-3

Truck Route

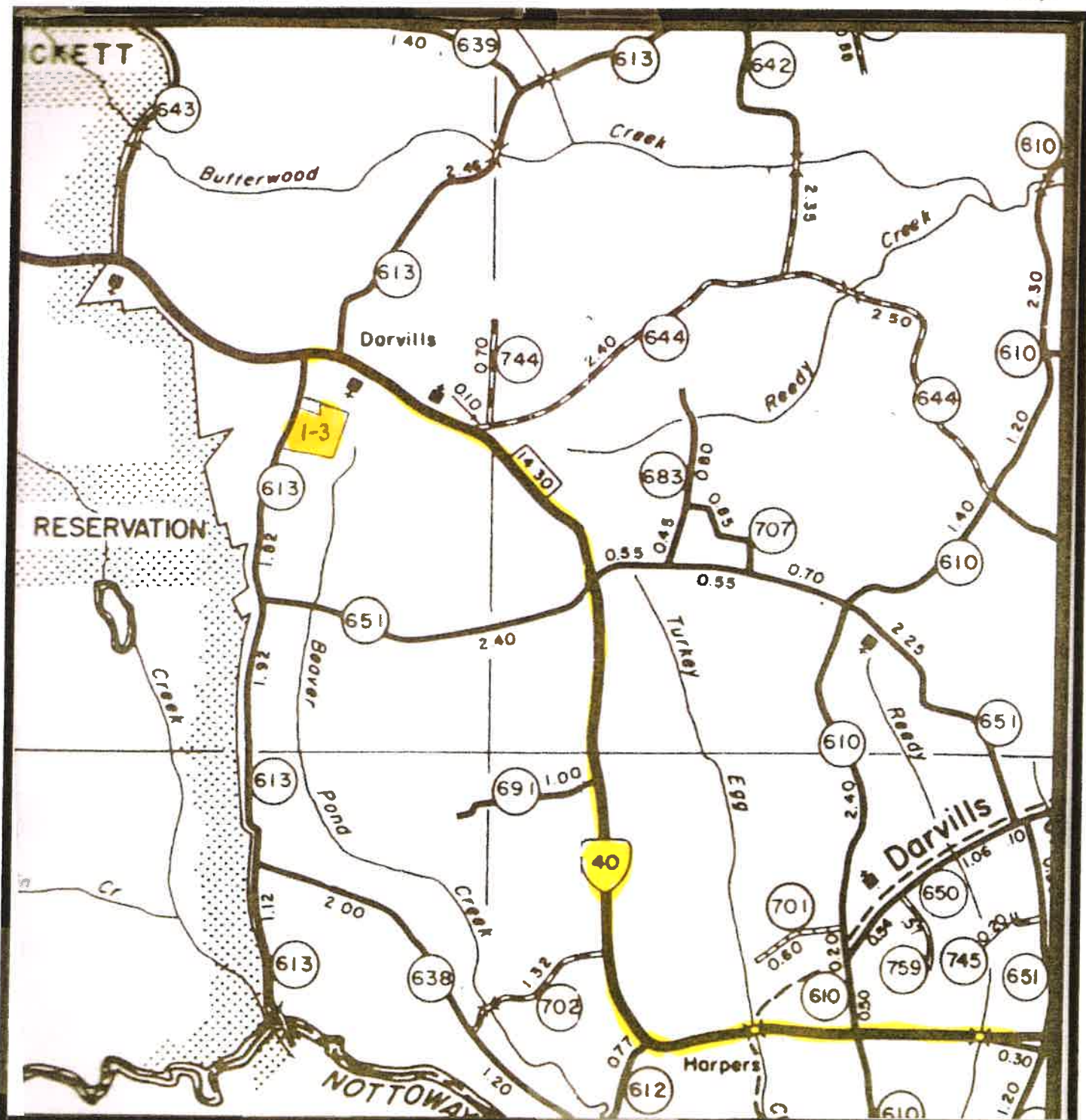
7-27-20

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 1 mile

DWHLR 1-3

VICINITY MAP

Truck
Route

7-27-20





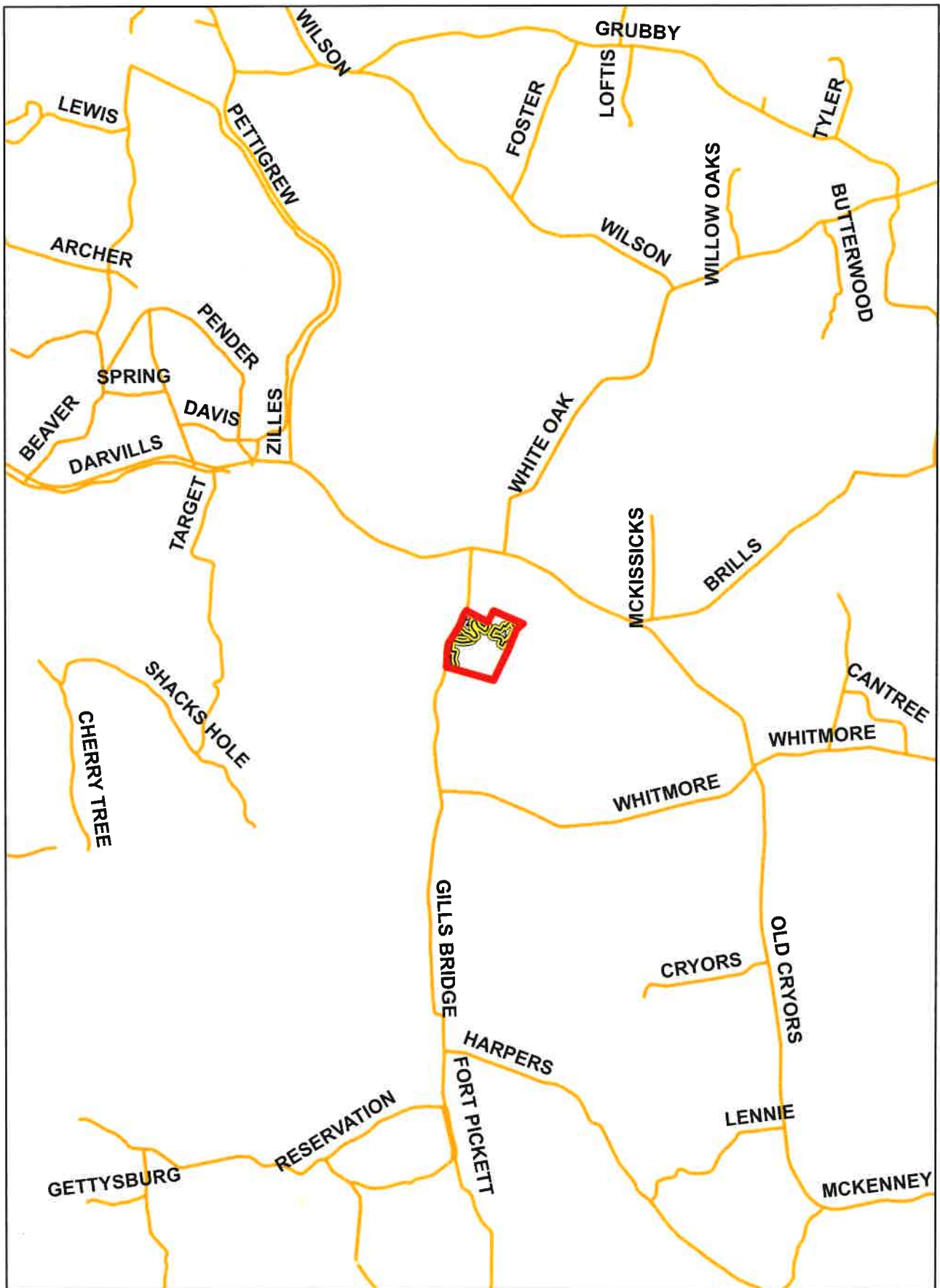
DWDAR



7-24-20

Vicinity Map

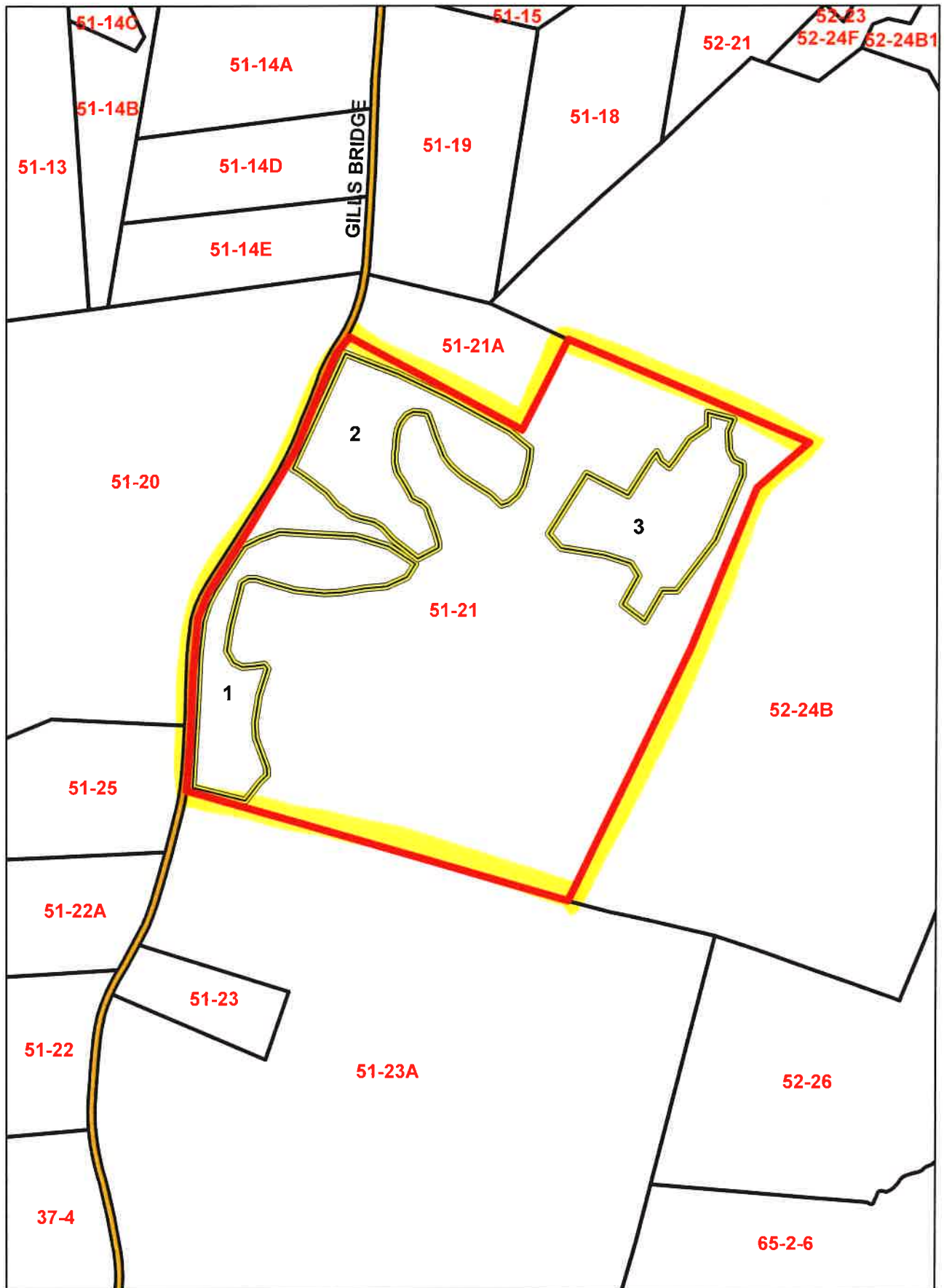
1 in = 2 miles



7-24-20

Vicinity Map

1 in = 1 miles



7-24-20

Tax Map

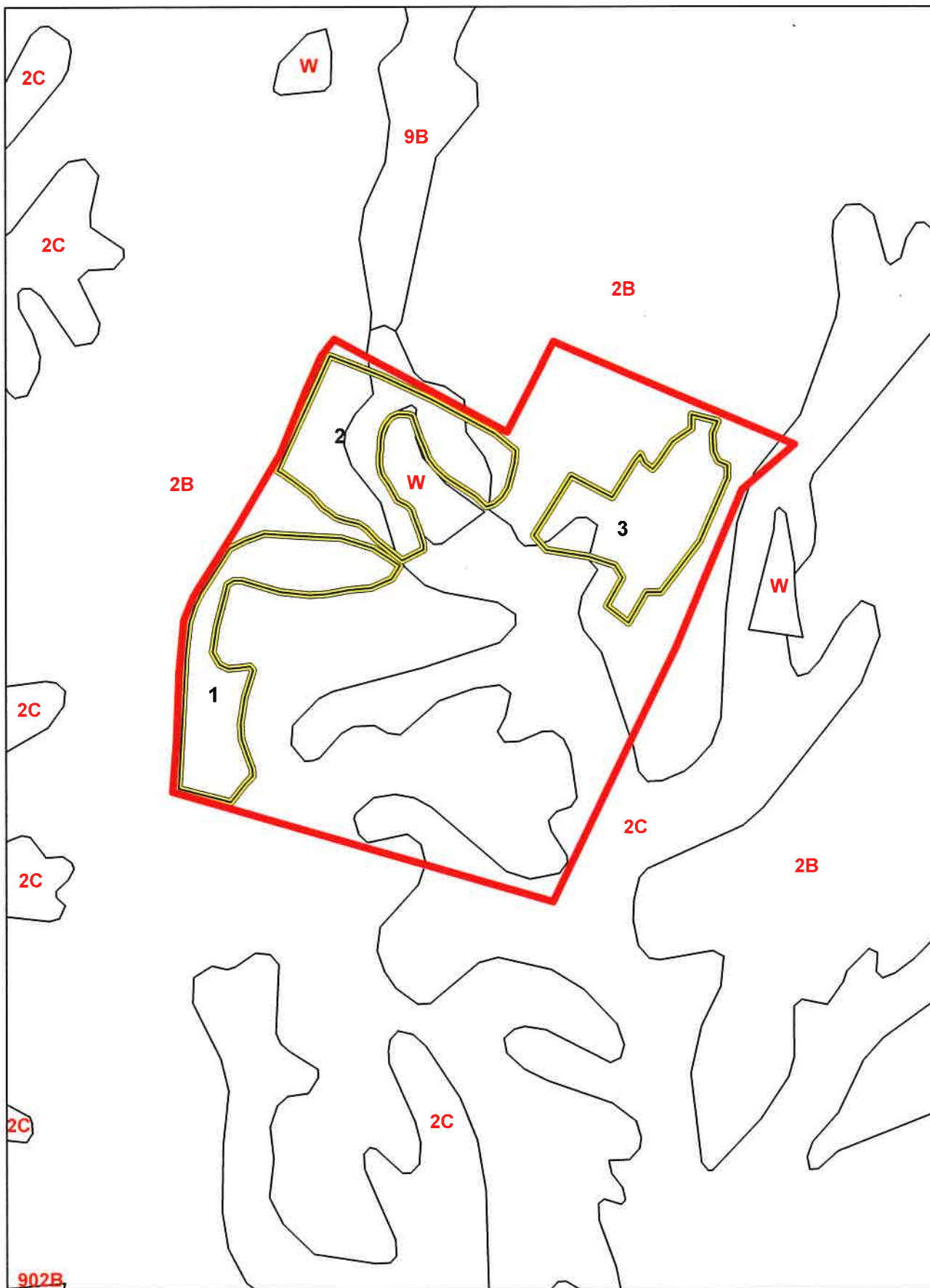
1 in = 660 feet

ADJOINING LANDOWNERS

Dorothy A. Rowe

Dinwiddie County

Tax Map	Parcel #	Owner Name(s)
51	14E	MAJS Investments LLC
	18	Darvills Association Inc C/O Bridgman Rennis W jr Reg. Agent
	19	Dorothy M Rowe
	20	Richard G Wilson
	23A	Southside AG Enterprises LLC
	24B	T&K Property Investment LLC
	25	Wainwright Horace Vunnally

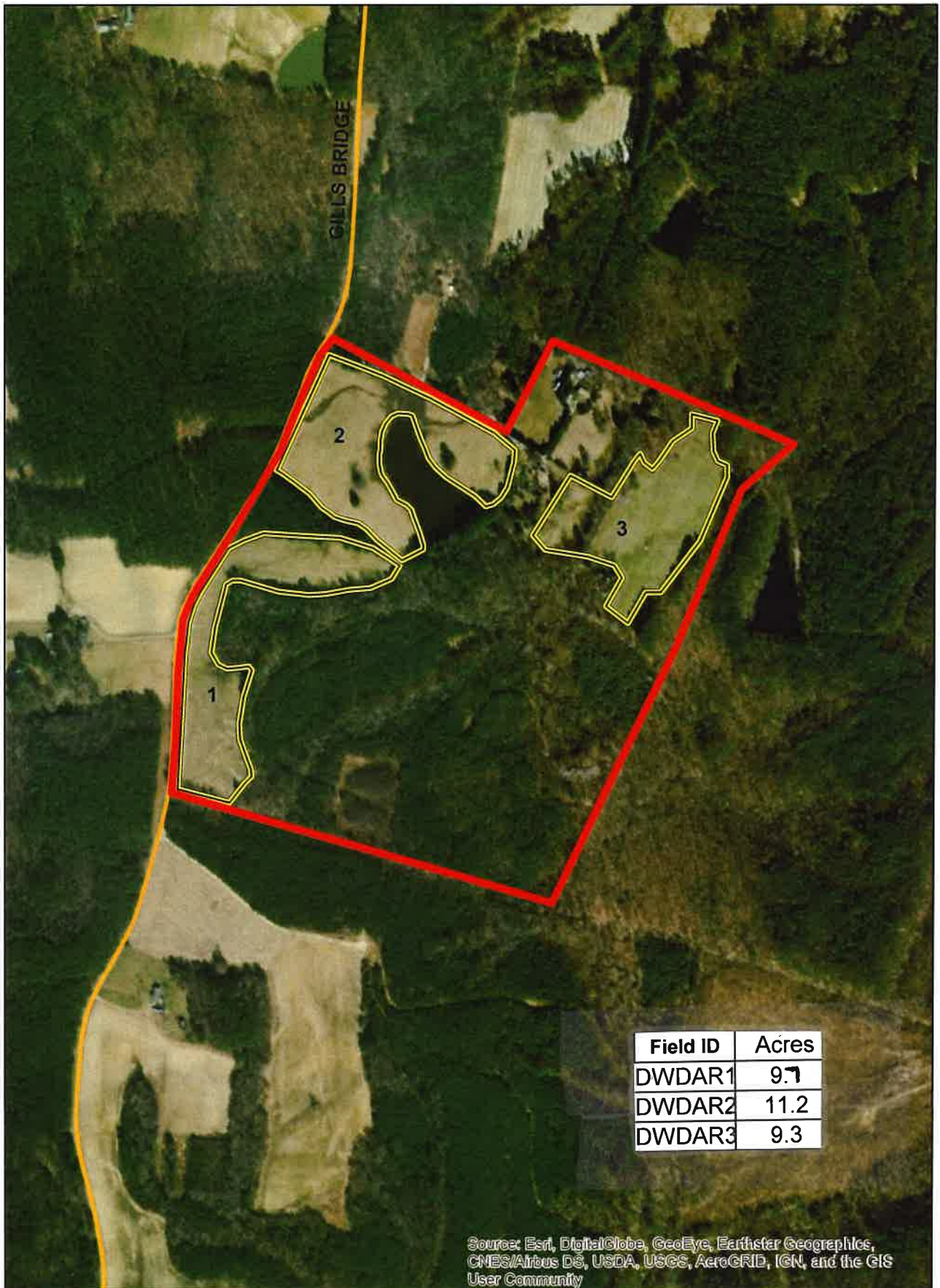


902B

7-24-20
Frequently
Flooded

Soil Map

1 in = 660 feet



7-24-20

Aerial Map

1 in = 660 feet



Farm 710

Tract 529

2020 Program Year

Map Created June 03, 2020

Common Land Unit
















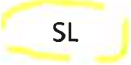


- Non-Cropland
- Cropland
- Tract Boundary

Wetland Determination Identifiers

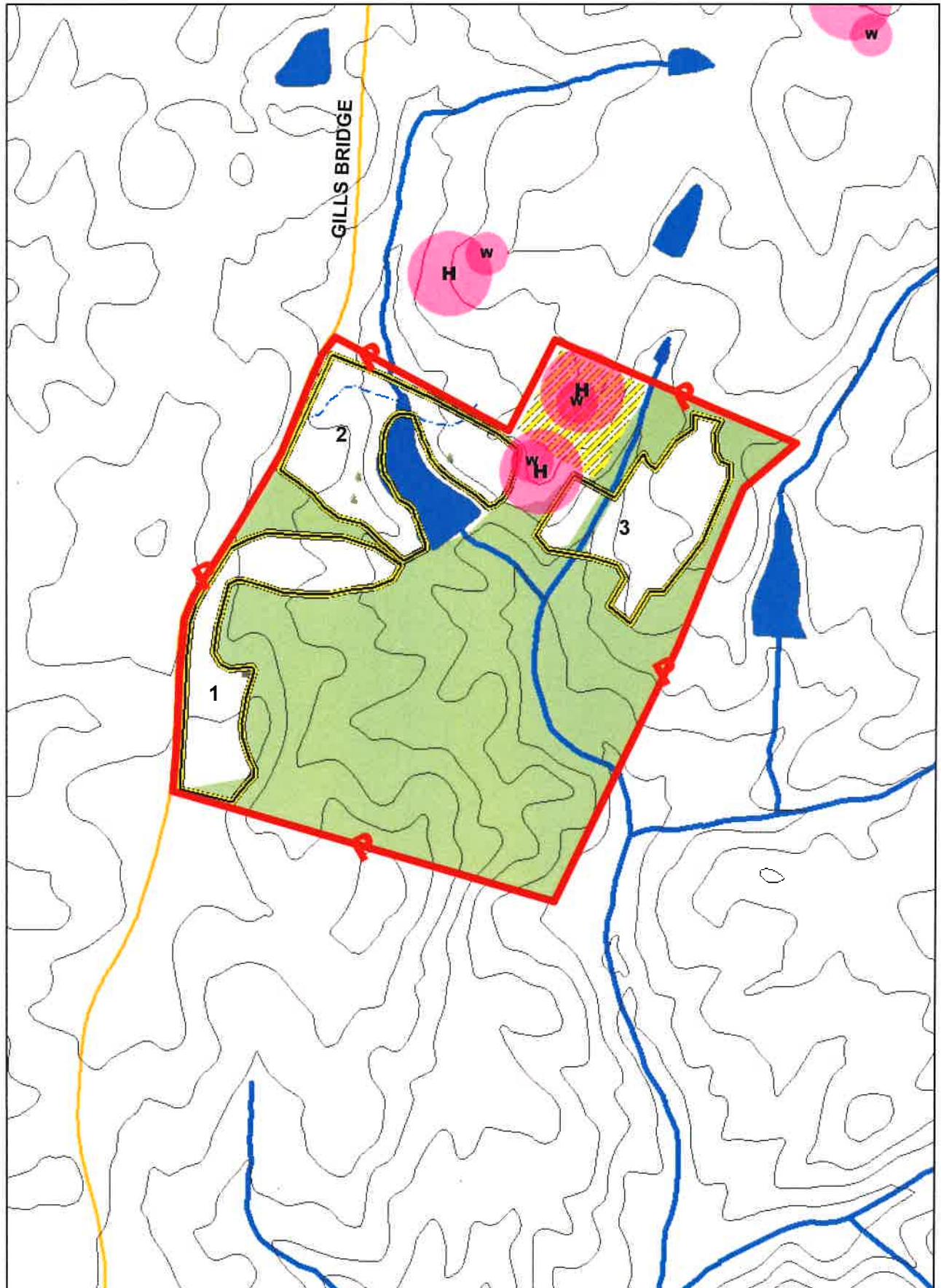
- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 37.88 acres

Legend For Site Plan

Symbol	Feature	Minimum Setback
	House and Well	200 feet from occupied dwelling * 100 feet from water supply wells or springs
 	Well or Spring	100 feet from water supply wells or springs
	Streams or Surface Water	35 feet with 35 foot vegetated buffer 100 feet without vegetated buffer
	Wet Spot	
	Trees and Woods	
	Private Drive	
	Rock Area/Rock Outcrop	25 feet from rock outcrops 50 feet from limestone rock outcrops
	Severely Eroded Spot	18 Inch minimum depth of soil
  	Sink Hole	100 feet from open sinkholes 50 feet from closed sinkholes
	State Road	10 feet from side of roadway
	Fence / Field Boundary	
	Property Line	100 feet from property line *
 	Slope	15% maximum
	Hashed out Area	No application

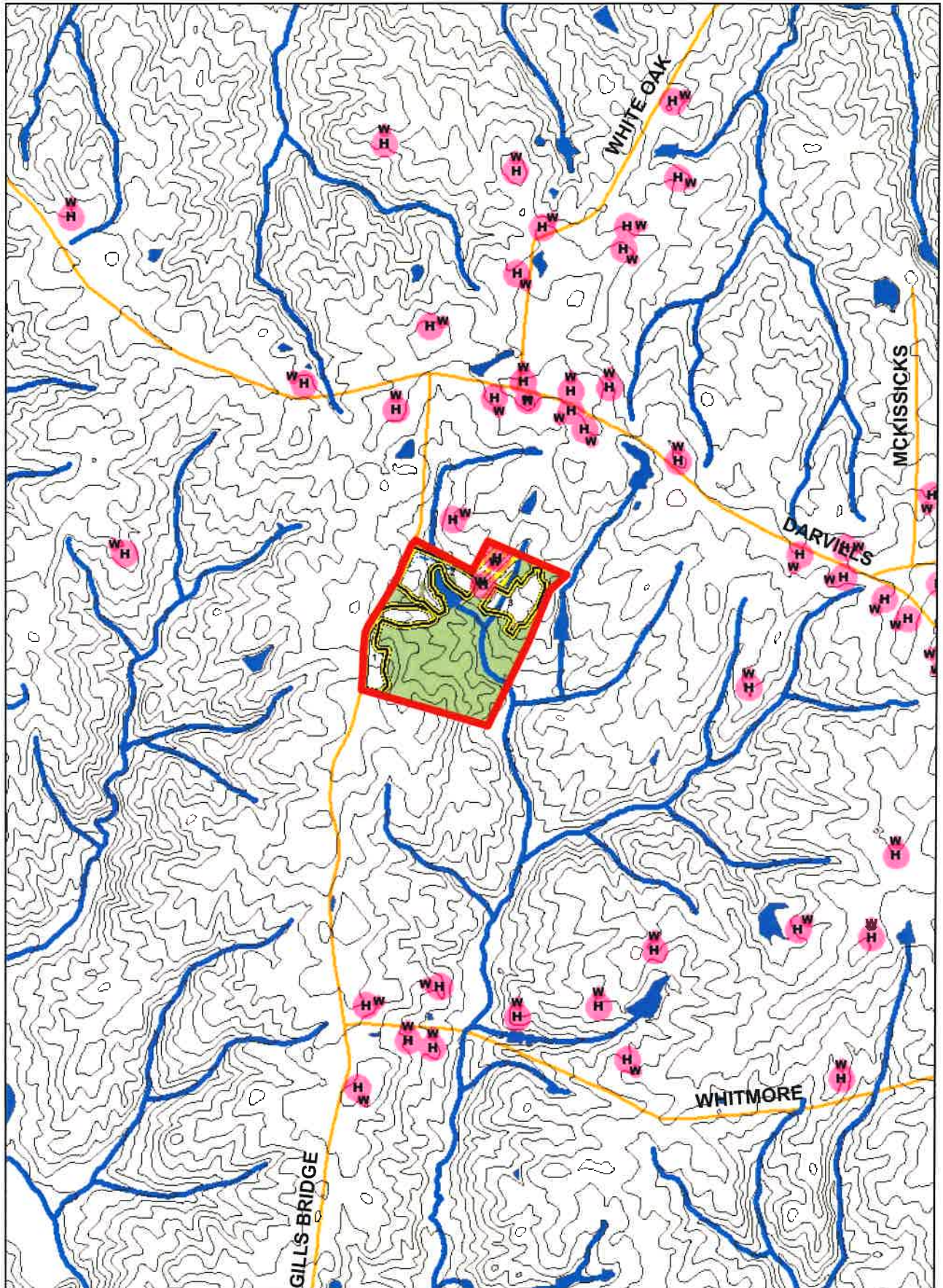
*Buffer can be reduced or waived upon written consent from landowner.



7-24-20

Site Map

1 in = 660 feet



7-24-20

Topographic Map

1 in = 2,000 feet